2013 False River Aquatic Vegetation Control Plan

LDWF, Inland Fisheries

In 2012, foliar herbicide applications were made on nuisance plants such as water hyacinth, duckweed and common salvinia in False River. A total of 159 acres of water hyacinth (*Eichornia crassipes*) was controlled with 2,4-D at a rate of 0.5 gallons per acre or diquat (0.75 gallons per acre) with a non-ionic surfactant (0.25 gallons per acre). Fifty five acres of duckweed (*Lemna spp.*) and 48 acres of common salvinia (*salvinia minima*) were controlled with diquat (0.75 gallons per acre) with a non-ionic surfactant (0.25 gallons per acre).

In summer of 2012, a Galleon (penoxsulam) application was made in a portion of Bayou Chenal. Specifically, a stagnant portion of the bayou between the railroad bridge at Highway 414 & Cline Drive stretching to the levee at the Mississippi River. Galleon is an in-water treatment that is self-dispersing. The chemical was applied at a rate of 35 parts per billion. The aquatic vegetation in the area at the time of treatment consisted of 100% coverage by duckweed, water hyacinth, and common salvinia, all listed as being controlled by Galleon. Due to the inability to traverse this stretch of bayou using boats, the application was made by District 7 personnel walking the banks and entering the water at 100 yard intervals, then applying the chemical by hand. A follow-up treatment was made some weeks later to this area. Post-treatment evaluation visits were made to ascertain the effectiveness of the application. Water hyacinth and common salvinia were controlled nearly 100 %, while the impact on duckweed was negligible.

Nuisance Aquatic Vegetation Problems:

Plant growth projections for summer 2013:

Duckweed (*Lemna sp.)* – 75 acres (all in Bayou Chenal)

Common salvinia (*Salvinia minima)* - 50 acres (bayous/fringe of main lake)

Water Hyacinth (*Eichhornia crassipes)* - 150 acres (bayous/fringe of main lake)

Proposed Control Measures:

Chemical Control

Water hyacinth (*Eichornia crassipes*) will be controlled with 2,4-D at a rate of 0.5 gallons per acre or diquat (0.75 gallons per acre) with a non-ionic surfactant (0.25 gallons per acre). Duckweed (*Lemna spp.*) will be controlled with diquat (0.75 gallons per acre)

with a non-ionic surfactant (0.25 gallons per acre). Common salvinia will be controlled with diquat (0.75 gallons per acre) with a non-ionic surfactant (0.25 gallons per acre).

With regard to the problematic area of Bayou Chenal between the railroad bridge and the Mississippi River levee, a full waterbody herbicide treatment is recommended for this nursery area as a feasible way to considerably reduce costs and complaints due to the duckweed infestation. Liquid Sonar A.S. (fluridone) should be used at very low concentrations, as it is proven to be highly effective against duckweed. Sonar is able to be poured directly into the water at different points along the treatment area. The herbicide disperses throughout the water effectively, reaching more of the target plant. The target area is approximately 20 surface acres. At a size of 20 surface acres, the amount of 4.75 ounces of Sonar A.S. per surface acre would be applied to achieve a target concentration of 55 ppb (parts per billion). Thus, for 20 acres, at rate of 4.75 ounces/acre, a total of 95 ounces would be applied at the initial treatment. A bump treatment, performed in order to maintain chemical concentrations, would be done 1 month post initial treatment. This bump treatment would be at 5 ppb or 0.43 ounces/acre for a total of 8.64 ounces.

Physical Control

No additional physical control measures are currently proposed for nuisance aquatic vegetation at False River.

Biological Control

No additional biological control measures are currently proposed for nuisance aquatic vegetation at False River.

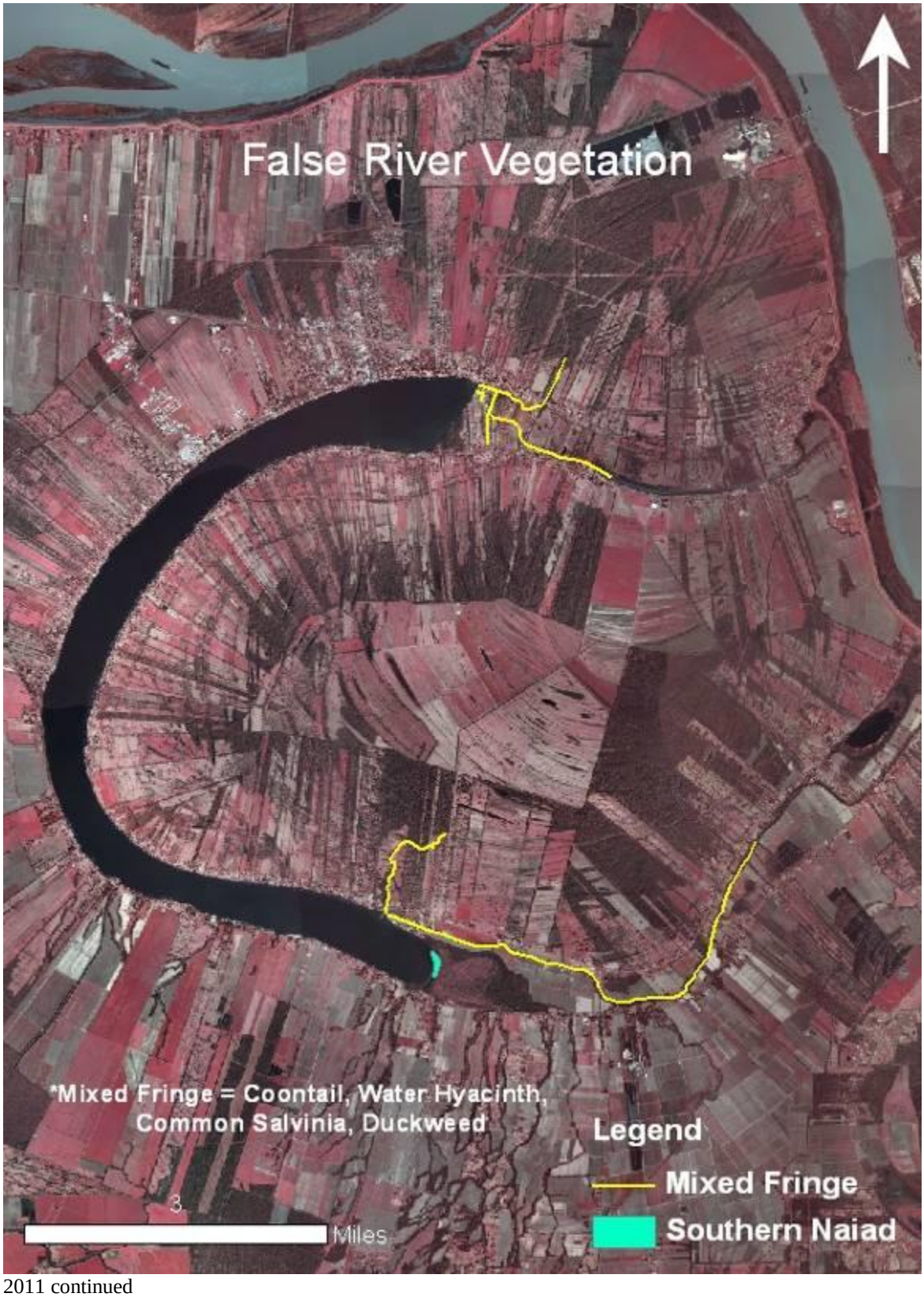
Typemap:

A lake vegetation survey was performed in fall 2012. The 15 acre stand of southern naiad (*Najas guadalupensis*) previously observed in 2011 is no longer present. No southern naiad was observed in the southern portion of the lake. All nuisance vegetation in the lake was confined to the canal systems on the north end, and the M-1 and Bayou Chenal on the south end. Nuisance vegetation consisted of water hyacinth, duckweed, and common salvinia sparsely strewn along the fringes of these areas.

False River Vegetation 2011

False River was surveyed on September 26, 2011 to determine aquatic plant abundance and species composition. There was a 15 acre stand of southern naiad (*Najas guadalupensis*) in the south flats. It occurred in water depths of 0ft-3ft. This was the predominant aquatic plant species in the lake. The north flats were void of any significant aquatic vegetation. Both the island side bank and the New Roads side bank were surveyed and also showed no signs of significant vegetation. Trace amounts of water hyacinth (*Eichhornia crassipes*), common salvinia (*Salvinia minima*), and duckweed (*Lemna spp.*) could be found throughout the lake along the banks. Bayou Chenal, Tee Bayou, False Bayou, and surrounding canals are all connected to False River. Each of these bayous and canals contained a healthy fringe of coontail (*Ceratophyllum demersum*). They were also infested heavily with water hyacinth (*Eichhornia crassipes*), common salvinia (*Salvinia minima*), and duckweed (*Lemna spp.*).

Jonathan Winslow
Inland Fish
Biologist



2011 continued


False River Vegetation
(South Flats)
*Mixed Fringe = Coontail, Water Hyacinth,
Common Salvinia, Duckweed
Legend
Mixed Fringe
Southern Naiad
1
Miles